By this Amendment, the specification has been amended, claims 4 and 5 have been cancelled and claims 7 and 8 have been added. Thus, upon entry of this amendment, claims 1-3 and 6-8 are currently in the present application.

In footnote number 1 of the Decision, BPAI noted that "there is no proper antecedent basis in the specification for the phrase cage level barrier...cage." BPAI recommended that the specification be amended to include antecedent basis for that phrase. In response thereto, applicants have amended the specification to address that alleged deficiency. Applicants also take this opportunity to correct certain typographic errors uncovered in the specification. Applicants respectfully submit that the above-descried amendments to the specification do not add new matter to the present application, as support for the addition of the phrase "cage level barrier...cage" can be found in the claims and drawings as originally filed and as currently in the present application.

In the Decision, BPAI first states that the Examiner's rejection of claims 1 and 3, and the claims that respectively depend therefrom, as obvious under 35 U.S.C. §103 in view of U.S. Patent No. 3,978819 to Lovitt, cannot be sustained.

BPAI then proceeds to enter new grounds of rejection pursuant to 37 CFR §1.196(b). Specifically, BPAI rejected claims 1 and 2 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,349,923 to Schaeffer et al. (Schaeffer) in view of applicants' admitted prior art (AAPA). BPAI also enters new ground of rejection for claims 3 and 6 under 35 U.S.C. §103 as being unpatentable over Schaeffer in view of U.S. Patent No. 5,894,816 to Coiro, Sr. et al. (Coiro). As set forth in more detail below, and as supported by the Declarations filed

concurrently herewith, applicants respectfully disagree with BPAI and, without amending the claims, respectfully traverse these rejections.

In making its rejection under 35 U.S.C. §103, BPAI concedes the disclosure of Schaeffer is deficient with regard to claims 1and 2 because Schaeffer does not "disclose the floor of the cage bottom having a length l and a width w wherein 80 square inches $\leq l \times w \leq 110$ square inches" (claim 1), and because Schaeffer does not "disclose the floor of the cage bottom having a length l and a width w wherein $l \times w$ is substantially 80 square inches" (claim 2). To overcome these deficiencies, BPAI relies on applicants' specification, and more precisely, applicants' discussion of prior art ventilated cage and rack systems. BPAI points to the third paragraph under the "BACKGROUND OF INVENTION" section on page 1 of the specification, where applicants discuss certain non-binding minimum dimensions of cages for particular rodents (e.g., mice and rats). Based upon applicants' discussion of prior art ventilated cage and rack systems, BPAI takes the position that "it would have been obvious...for an artisan with ordinary skill in the art to determine a set of dimensions for the floor area of Schaeffer's cage that would result in a floor area of 80 square inches." Applicants respectfully submit that certain products manufactured and sold by Lab Products, Inc.[1] (LPI), and covered by claims 1 and 2 of the present application, satisfied a long-felt need in the art and also achieved immediate commercial success. For these reasons, and as set forth in detail below and as supported by the Declarations filed concurrently herewith, applicants respectfully disagree with BPAI that applicants' invention is obvious.

[1] Assignee of the present application.

To overcome an obviousness rejection, an applicant may submit objective evidence of commercial success, long-felt but unsolved needs, failures of others, and copying. See, e.g., In re Ben Huang, 100 F.3d 135, 139, 40 USPQ2d 1685 (Fed. Cir. 1996), citing Graham v. John Deere Co., 338 U.S. at 17-18, 148 USPQ at 467 (1966); and MPEP §716.03 and §716.04. Applicants respectfully submit herewith the Declarations of Betty Fatzie and Dietrich Crase to support applicants' position that the present invention is not obvious over the Examiner's proposed hypothetical combination of Schaeffer and AAPA, nor the Examiner's proposed hypothetical combination of Schaeffer and Coiro.

An applicant who is asserting commercial success to support its contention of nonobviousness bears the burden of proof of establishing a nexus between the claimed invention and evidence of commercial success. The term "nexus" designates a factually and legally sufficient connection between the evidence of commercial success and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. See e.g., MPEP §716.03 and Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir. 1988). Applicants respectfully submit that such a factually and legally sufficient connection exists with regard to cage level barrier rodent cages and systems sold by LPI under the brand name One Cage™ System, and covered by at least claims 1 and 2 of the present application. Applicants further respectfully submit that such a nexus is clearly demonstrated by the Declarations of Betty Fatzie and Dietrich Crase, submitted concurrently herewith.

With regard to Ms. Fatzie's Declaration, as noted in paragraph 9 thereof, when LPI began selling its One Cage™ System in 1999, LPI was then selling a variety of cage level barrier rodent cages and systems; each such cage and system being intended for use with a single,

specific rodent type, and each such cage being sized to house a single specific rodent type or a plurality of that specific rodent type, and to meet ILAR standards. Thus, in 1999, a LPI customer could purchase from LPI (and ostensibly from other suppliers) a variety of different cage level barrier rodent cages and systems. Despite that fact, sales of LPI's One Cage™ System for the first three years following its introduction (1999-2001) were $9,430,000, accounting for 24% of LPI's gross sales for all its cage level barrier rodent cages and systems for that time period.

Applicants submit that one reason for the immediate commercial success of LPI's One Cage™ System is the fact that the novel and unobvious dimensions of the cage level barrier rodent cage (as recited by claims 1 and 2) eliminates the need for a laboratory to purchase and inventory a plurality of cage and rack sizes for distinct types (species) of rodents. That fact results in significant cost savings. See, e.g., Fatzie Declaration, paragraph 12. Applicants further respectfully submit that another reason for the immediate commercial success of LPI's One Cage™ System is that a cage level barrier rodent cage covered by claims 1 or 2 (as is LPI's One Cage™ System) provides customers with the ability to standardize the size of their cage level barrier rodent cages and systems. See, e.g., Fatzie Declaration, paragraph 13. Finally, applicants respectfully submit that still another reason for the immediate commercial success of LPI's One Cage™ System is that a cage level barrier rodent cage covered by claim 1 or 2 (as is LPI's One Cage™ System) eliminates the inefficiency that occurs during cleaning, sorting and delivering the various different size and shape cage level barrier rodent cages when transitioning from one study to the next, or in the ordinary course of cleaning the cages during a particular study. See, e.g., Fatzie Declaration, paragraph 14.

With regard to Mr. Crase's Declaration, applicants respectfully submit that paragraph 8 thereof clearly supports applicants claim of commercial success and further provides the necessary legal and factual nexus between the claimed invention and the commercial success. In that paragraph, Mr. Crase states that the "benefits recognized by Advanced Medicine...are due to the...unique size and proportion [of LPI's One Cage™ System], specifically, to the fact that the cage level barrier rodent cage of the One Cage™ System has a floor with a footprint with an area of 80 square inches."

Applicants respectfully submit that both the Fatzie and Crase Declarations provide the necessary legal and factual nexus between the claimed invention (as recited by claims 1 and 2) and the commercial success of LPI's One Cage™ System which, as stated above, is covered by claims 1 and 2 of the present application.

Objective evidence of nonobviousness including commercial success, such as that provided by applicants by way of the Fatzie and Crase Declarations, must be commensurate in scope with the claims. See, e.g., MPEP §716.03 and In re Tiffin, 448 F.2d 791, 171 USPQ 294 (CCPA 1971). In order to be commensurate is scope with the claims, the commercial success must be due to claimed features, and not due to unclaimed features. See, e.g., MPEP §716.03 and Joy Technologies Inc. v. Manbeck, 751 F. Supp. 225, 229, 17 USPQ2d 1257, 1260 (D.D.C. 1990), aff'd, 959 F.2d 226, 228, 22 USPQ2d 1153, 1156 (Fed. Cir. 1992). Once again, applicants respectfully submit that both the Fatzie and Crase Declarations establish that the commercial success experienced by LPI with its One Cage™ System was due to the novel and unobvious dimensions of the cage level barrier rodent cage (as recited by claims 1 and 2). See, e.g., Fatzie Declaration, paragraphs 3 and 9-14 and Crase Declaration, paragraphs 6-8.

Applicants respectfully submit that the commercial success of LPI's One Cage™ System was due to the novel and unobvious dimensions of the cage level barrier rodent cage provided as part of that System; those dimensions being recited in claims 1 and 2. Applicants further respectfully submit that LPI's One Cage™ System satisfied a long-felt need in the art. Applicants further respectfully submit that the Declarations of Betty Fatzie and Dietrich Crase support applicants' position, and provide sufficient legal and factual nexus between the commercial success and the invention recited by claims 1 and 2. For those reasons, applicants respectfully submit that the BPAI rejection of claims 1 and 2 under 35 U.S.C. §103 as unpatentable over Schaeffer in view of AAPA is no longer tenable, and applicants respectfully request withdrawal of that rejection and reconsideration of the patentability of claims 1 and 2 in view of the remarks provided above and further in view of the Fatzie and Crase Declarations filed herewith.

BPAI has also rejected claims 3 and 6 under 35 U.S.C. §103 as being unpatentable over Schaeffer in view of U.S. Patent No. 5,894,816 to Coiro, Sr. et. al. (Coiro). As set forth in more detail below, and as supported by the Declarations filed concurrently herewith, applicants respectfully disagree with BPAI and, without amending the claims, respectfully traverse that rejection.

The Fatzie and Crase Declarations again provide evidence of the commercial success of LPI's One Cage™ System, which is covered by claims 3 and 6 (and by claims 4 and 5, but which are not discussed in detail here for the reasons stated below). Applicants submit that the commercial success of LPI's One Cage™ System is again due to the novel and unobvious dimensions of the cage, as recited by claims 3 and 6. By providing a cage having a length that is

substantially less than 18 inches, as recited by claim 3, or a cage having a length that is substantially less than 36 inches, as recited by claim 6, LPI's One Cage™ System provides a cage level barrier ventilated rack and cage system for housing a plurality of types of rodents with a standardized footprint. For example, the 18 inch or 36 inch footprint defined by the length of the cage, enables LPI's One Cage™ System to fit through a standard commercial doorway. See, e.g., Fatzie Declaration, paragraph 4. That simplifies facilities planning and design because a single doorway size will accommodate the cage level barrier ventilated rack and cage systems for a plurality of different rodent types (using LPI's One Cage™ System). See, e.g., Fatzie Declaration, paragraph 13 and Crase Declaration, paragraph 11. A standardized footprint also enables more efficient use of laboratory space. See, e.g., Fatzie Declaration, paragraph 13 and Crase Declaration, paragraph 11. Applicants respectfully submit that the novel features recited by claims 3 and 6 have directly contributed to the commercial success of LPI's One Cage™ System. In addition, applicants submit that the Declarations submitted herewith in support of applicants' position regarding the commercial success of LPI's One Cage™ System overcome BPAI obviousness rejection of claims 3 and 6.

Applicants also take this opportunity to address the deficiencies of Coiro as a prior art reference to applicants' invention. First, although Coiro may appear on its face to be directed to "cage receptacle for housing laboratory creatures" (see, e.g., Abstract), the disclosure is directed almost exclusively to mice. See, e.g., column 3, lines 58, 66, and column 4, lines 1 and 26. Applicants' invention, on the other hand, as disclosed in the specification and as recited by the claims, is directed to a "multipurpose cage level barrier rodent cage for housing multiple species of rodent". See, e.g., claim 1. Second, Coiro solves a different problem from the one addressed

and solved by applicants' invention. Coiro is directed at "enhancing the floor space of the cage receptacle as compared with prior art cages, while maintaining the compatibility with existing wire bar lids and microbarrier tops." See, e.g., column 2, lines 17-20. Applicants' invention, in contrast, is intended to "provide a cage and rack system which, within the standard size constraints of the rack, increases the density of the rat population per rack, without substantially sacrificing the density of other species housed in the rat cage." See, page 3, lines 4-7 of applicants' specification.

For the reasons stated above, applicants respectfully submit that the BPAI rejection of claims 3 and 6 under 35 U.S.C. §103 as unpatentable over Schaeffer in view of Coiro is no longer tenable, and applicants respectfully request withdrawal of that rejection and reconsideration of the patentability of claims 3 and 6 in view of the remarks provided above and further in view of the Fatzie and Crase Declarations filed herewith.

Applicants finally note that BPAI did not enter new grounds of rejection for claims 4 and 5. In view of that fact, and further in view of the fact that BPAI overruled the Examiner's rejection of claims 1 and 3, and of the claims that respectively depend therefrom, applicants respectively submit that claims 4 and 5 are patentable over the prior art of record. Applicants respectfully present new independent claims 7 and 8 in this amendment. Applicants respectfully submit that claims 7 and 8 are merely claims 3 and 4, and 3 and 5, respectively, rewritten in independent form. Thus, no new matter is added by new claims 7 and 8. Moreover, in view of the BPAI treatment of claims 4 and 5 in the Decision, applicants submit that new claims 7 and 8 are allowable over the prior art of record.

Applicants thus believe that all claims pending in the present application (i.e., claims 1-3 and 6-8) are in condition for allowance. Applicants respectfully requests reconsideration of the present application in view of the amendments to the claims and remarks provided herein.

The changes to Specification and Claims made by this Amendment are indicated on pages 16-21 of this Amendment.

Any fees or charges required at this time and in connection with this Amendment and with the present application may be charged to Deposit Account No. 19-4709.

Respectfully submitted,

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CHANGES TO THE SPECIFICATION

Page 1, last paragraph, continuing to page 2, first partial paragraph:

A drawback of the prior art cages is that a variety of different cage sizes, necessary to support the different rodent types, must be inventoried and managed so that the appropriate cage size is available for a particular study. For example, the standard rat cage used in the art has a 140 square inch footprint providing for housing of up to three rats in each cage. On the other hand, the standard size for a mouse cage has become 75 square inches allowing up to five mice of 25 grams each to be housed therein. Rat cages are also taller than mice cages and therefore the wire bar lid holding food and water is higher from the ground in rat cages than mice cages, therefore one cannot readily house mice in the standard rat cage. This problem is exacerbated in large research facilities, for example, the National Institute of Health (NIH), where 20 to 30 different cage sizes have to be coordinated. Furthermore, each different cage size requires that the corresponding rack that supports the particular cage size and corresponding accessories be used. This forces the facility to inventory and manage a variety of different rack sizes as well.

Page 4, last paragraph, continuing to page 5, first partial paragraph:

Referring now to FIGS. 1-6, there is shown a cage level barrier rat cage 1 constructed in accordance with the present invention. As used herein, the term "cage level barrier rodent cage" means a cage having walls and floor that collectively form a barrier at the cage level protecting both lab personnel and the animals contained within the cage from contamination. Rat cage 1 includes a cage bottom 3 having four integral side walls 12 and a floor 13. Cage bottom 3 also includes an open top end 16. Extending continuously around top end 16 of cage bottom 3 is a

peripheral lip 8 having a smooth and flat surface. A rim 4 vertically descends from peripheral lip 8. A pair of recesses 35, 35' are formed in peripheral lip 8. In an exemplary embodiment, recess 35 is disposed in the portion of peripheral lip 8 adjacent a corner of cage bottom 3 while recess 35' is disposed in the portion of peripheral lip 8 that is opposite recess 35.

Page 5, first complete paragraph:

Although cage bottom 3 may be constructed from any suitable material, it is preferable that it be molded from transparent plastic so that the rat contained in cage bottom 3 can be monitored through side walls 12. Also, it is preferred that cage bottom 3 have rounded corners thereby preventing the rats from ~~purchasing~~ chewing on the corners and gnawing their way out of cage 1.

Page 12, last paragraph, continuing to page 13, first partial paragraph:

A plurality of rat cages 1 may be positioned within rack 212. Each cage is positioned within rack 212 by a canopy, generally indicated at 230. Each canopy 230 shrouds a cage 1 below a canopy 230. Accordingly, each canopy 230 is shaped and positioned so as to substantially surround the top 9 of the cage 1b while maintaining a short gap h between top 9 and canopy ~~240.~~ 230. Perforations 243 are positioned adjacent each of canopies ~~240.~~ 230. Gap h should be sufficient to allow movement of gases between canopy 230 and top 9, and top 9, and in an exemplary embodiment gap h is 3/16 of an inch to ¼ of an inch. Canopy 230 profiles bonnet 14, preferably creating a tension fit against the sidewall of bottom 3 of cage 1b. The rear of canopy 230 contacts air exhaust plenum 242.

Page 14, second paragraph, continuing to page 15, first partial paragraph:

In a preferred embodiment, the rack 212 has a width W of 86.25 inches, a depth D of 32.5 inches and a height H of 79.875 inches. A limitation on the rack is that it should fit through a standard door. To achieve this result, height of the rack can be no greater than 80 inches and the depth of the rack with cages stacked on either side, if a dual sided rack, can be no greater than 36 inches. In a preferred embodiment, rack 212 supports one hundred and twelve cages 1. Because the cages have a floor space of between 80 inches and 140 inches, they hold a minimum of two rats per cage for a total of two hundred twenty four rats between 300 and 400 grams each. ~~At the same~~ Alternatively, at least five mice of up to 25 grams can be housed per cage yielding five hundred sixty mice for the entire rack. This is in comparison with prior art rat units which had a width of 85.063 inches, a depth of 26.375 inches and a height of 65.062 inches and which housed only thirty-six 140 square inch cages. Placing three rats into each of the prior art cages yielded one hundred and eight rats. Accordingly, the number of rats housed in the present rack is an increase of 107% over the number of rats housed in prior units without a corresponding increase in rack footprint. At the same time, the reduction in the number of mice housed in a rat cage of the type disclosed herein as compared to the rack specifically designed for mice is a reduction of less than 20%. Accordingly, the efficiency of the overall rack system for housing both mice and rats is increased.

Page 16, last partial paragraph, continuing to page 17, first partial paragraph:

The durability and reliability of cage 1 of the present invention is also improved. Also, rounded lip 17, extending from feeder assembly 23, which is received by receiving portion 19 of top 9, prevents rats from perching and accessing food in feeder assembly 23 from above. ~~By~~ In addition, radiusing supports 52, 52' of feeder ~~23,~~ 23 eliminates purchase points on the feeder. Furthermore, by mounting either water bottle support 31 or food holder 37, both made of stainless steel, to the bottom of supports 52, 52' of feeder assembly 23, the rats are prevented from gnawing through the bottom of feeder assembly 23. Also, by forming top 9 from stainless steel, or radiusing passages 62 in plastic the rats will be unable to gnaw through bonnet 14. Finally, by including lock 43 on bonnet 14, the rats housed in cage bottom 3 will be unable to displace bonnet 14 and escape.

CHANGES TO THE CLAIMS

1. A multipurpose cage level barrier rodent cage for housing multiple species of rodents, including a plurality of mice or rats in a ventilated rack and cage system, the cage comprising a cage bottom having a plurality of integral side walls, a floor and an open top end, said floor having a length l and a width w wherein

80 square inches $\leq l \times w \leq$ 110 square inches

2. The multipurpose rat cage of claim 1, wherein $l \times w$ is substantially 80 square inches.

3. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising a double sided rack, the rack having a depth;

at least one cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches.

Shaffer / Coiro

~~4. The system of claim 3, wherein said cage bottom has a length *l* and a width *w*, wherein~~

~~80 square inches $< l \times w <$ 110 square inches~~

~~5. The system of claim 3, wherein the rack has a depth and the cage rests within said rack so that said length of said cage at least partially overlaps said depth of said rack and a portion of said cage extends beyond said rack, the portion having a length and the sum of the length of the portion and the depth of said rack is less than or equal to substantially 36 inches.~~

6. The system of claim 3, wherein said length *l* of said cage is less than substantially 36 inches. 103 W 3

7. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising:

a double sided rack, the rack having a depth; and

a cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches;

wherein said cage bottom has a length l and a width w, and wherein 80 square inches $< l \times w <$ 110 square inches.

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8. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising:

a double sided rack, the rack having a depth; and

a cage disposed in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially a 18 inches;

wherein said rack has a depth and said cage rests within said rack so that said length of said cage at least partially overlaps said depth of said rack and a portion of said cage extends beyond said rack, the portion having a length and the sum of the length of the portion and the depth of said rack is less than or equal to substantially 36 inches.

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